

REMARKS

Claims 1 and 3-30 remain pending in the instant application. All claims presently stand rejected. Claims 1, 17, and 23 are amended herein. Claims 2, 3, 31, and 32 are hereby cancelled without prejudice. Entry of this amendment and reconsideration of the pending claims are respectfully requested.

Claim Objection

Claims 1 and 17 have been amended to address the Examiner's concerns.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 4, 6, 9-15, 17-28, 31, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable Agrawal (US 5,636,210) in view of Crayford et al. (US 6,151,316). Claims 2, 3, 5, 7, 8, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable Agrawal, in view of Crayford, in further view of Kamaraj et al. (US 6,501,757).

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art.” M.P.E.P. § 2143.03.

Amended independent claim 1 now recites, in pertinent part,

a set of ***m* input ports** to receive cells;
a set of ***n* buffer groups**, each buffer group comprising a set of buffers,
where *n* > *m*;
an input-to-buffer switching module to switch a cell received at one of the ***m*** input ports to one of the ***n*** buffer groups, wherein the input-to-buffer switch module comprises a **single stage *m* by *n* crossbar switch**

Applicants respectfully submit that the combination of Agrawal, Crayford, and Kamaraj et al. fails to teach or suggest a single stage *m* by *n* crossbar switch, where *n* > *m*.

The Examiner acknowledges “Agrawal in view of Crayford does not expressly disclose that the input-to-buffer switching module is a single stage *m* by *n* crossbar switch...” *Office Action* mailed April 6, 2005, page 12, paragraph 30. However, the

Examiner cites Kamaraj as teaching “an ATM switch, using a crossbar switch in place of a banyan router...”

Fig. 5 of Agrawal discloses an input processing module (“IPM”) 26 having m input ports ($m = 64$). The Examiner cites the regular buffer groups 23 and the overflow buffer groups 27 as corresponding to the claimed n buffer groups. Agrawal discloses 64 regular buffer groups and 16 overflow buffer groups. As such, the Examiner states $n = 80$ for Agrawal and considers the regular and overflow buffer groups as collectively corresponding to the claimed “ n buffer groups.” However, Agrawal clearly illustrates a 64×64 Banyan router to switch cells from the input ports to regular buffer groups 23 and series coupled 64×16 and 16×16 Banyan routers to switch cells from the input ports to the overflow buffer groups. At no time does Agrawal teach or suggest an input-to-buffer switching module including a **single stage m by n switch**, where $n > m$. In contrast Agrawal clearly uses separate Banyan routers for regular buffer groups 23 and overflow buffer groups 29. Consequently, the combination of Agrawal and Crayford fails to teach or suggest all elements of claim 1, as required under M.P.E.P. § 2143.03.

Amended independent claim 1 is nonobvious over the cited prior art for a second independent reason.

“To establish a prima facie case of obviousness ... there must be some suggestion or motivation ... to modify the reference or to combine reference teachings. M.P.E.P. § 2143. If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. M.P.E.P. § 2143.01.

As mentioned above, the Examiner cites Kamaraj as disclosing motivation to replace the Banyan router of an ATM switch with a crossbar switch. However, even if the 64×64 , the 64×16 , and the 16×16 Banyan routers disclosed in Agrawal were each individually replaced with a crossbar switch, the combination would result in IBSM 29 having three independent crossbar switches. Agrawal and Kamaraj simply do not provide any motivation or suggestion to replace multiple Banyan routers with a single crossbar switch and the Examiner has provided not such motivation. **At best, the Examiner has provided possible motivation for a one-to-one replacement of a single Banyan router with a single crossbar switch.** The prior art of record does not teach or

suggest an input-to-buffer switching module having a single stage m by n crossbar switch. To establish a prima facie case of obviousness the Examiner must cite prior art teaching or suggesting all claim limitations. M.P.E.P. § 2143.03.

Additionally, Kamaraj would be rendered unsatisfactory for its intended purpose if the three Banyan routers were replaced by a single crossbar switch.

Kamaraj would be rendered inoperable if the 64 x 64 and 64 x 16 Banyan routers were replaced with a single crossbar switch because the 64 x 64 and 64 x 16 Banyan routers disclosed in Kamaraj operate with separate routing tag attachment units controlled by separate buffer allocation mechanisms. Attempting to feed cells to a single crossbar switch under the control of multiple buffer allocation mechanisms and multiple routing tag attachments, as illustrated and disclosed in Agrawal, would render Agrawal inoperable.

Accordingly, since the Examiner's proposed modifications to Agrawal, in view of Kamaraj, would render Agrawal inoperable for its intended purpose, there can be no motivation to combine the references, pursuant to M.P.E.P. § 2143.01. Further as discussed above, the combination of Agrawal and Crayford fails to teach or suggest all elements of claim 1, as required under M.P.E.P. § 2143.03. Independent claim 17 and 23 include similar nonobvious elements as independent claim 1. Accordingly, Applicants request that the instant §103(a) rejections of claims 1, 17, and 23 be withdrawn.

Dependent claims 3-16, 18-22, and 24-30 are nonobvious over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims, in addition to adding further limitations of their own. Accordingly, Applicants respectfully request that the instant § 103 rejections for claims 3-16, 18-22, and 24-30 be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe the applicable rejections have been overcome and all claims remaining in the application are presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the

undersigned representative at (206) 292-8600 if the Examiner believes that an interview might be useful for any reason.

CHARGE DEPOSIT ACCOUNT

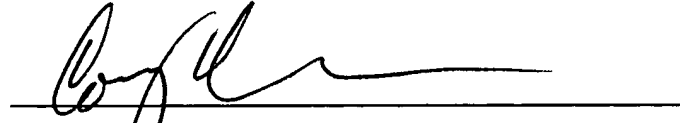
It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

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Date:

July 5, 2005



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